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TITLE: GAS REPLACING METHOD AND APPARATUS, AND EXPOSING METHOD AND ALIGNER

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ABSTRACT:

PROBLEM TO BE SOLVED: To provide a gas replacing method and gas replacing apparatus and an exposing method and aligner by which the gas in a space formed between a substrate and a film placed on the substrate through a frame member can be replaced with efficiency and stability.

SOLUTION: A pellicle frame PF interposed between a mask M and a pellicle PE has a plurality of ventilating holes h1-h4. A gas replacing device C is provided with a first chamber 81 in which a part of the ventilating holes h1 and h2 are placed, a second chamber 82 in which the other ventilating holes h3 and h4 are placed, a gas supplying apparatus 83 which pressurizes the first chamber 81 by a specified gas, and a depressurizing apparatus 84 which depressurizes the second chamber 82 by the pressure of a space GS. Consequently, the gas in the space GS formed between the mask M and the pellicle PE can be replaced with the specified gas with efficiency.

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